



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,286	02/09/2004	Dean E. Draxton	839-1525	8737
30024	7590	06/14/2005	EXAMINER	
NIXON & VANDERHYE P.C. 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			KUNDU, SUJOY K	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/773,286	DRAXTON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sujoy K. Kundu	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-20, drawn to a method of presenting a changing combustor condition, classified in class 702, subclass 182.
- II. Claims 21-23, drawn to a method to adjust a boiler having a flue gas duct, classified in class 702, subclass 182.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because invention I teaches a method of presenting a changing combustor condition. The subcombination has separate utility such as in the instant case Invention II teaches adjusting the boiler to modify the distribution of flue gases in the gas duct which is lacking from Invention I.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Jeffry H. Nelson on June 6, 2005 a provisional election was made without traverse to prosecute the invention of a

Art Unit: 2863

method of presenting a changing combustor condition, claims 1-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 21-23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non elected invention.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cleary (6,778,937).

Regarding claim 1, Cleary teaches a method of presenting a changing combustor condition comprising:

Sensing the combustor condition using a sensor array in a gas path of the combustor (Column 11, Lines 25-30);

Generating data from the sensor array representative of the combustor condition at a plurality of positions in the gas path (Column 7, Lines 16-25);

Transmitting the generated data to a computer system proximate to a control interface for the combustor (Column 8, Lines 20-46);

Generating a graphical representation (Fig. 2) of the showing combustor conditions in the gas path (Column 3, Line 7-17), and

Displaying the graphical representation on the computer system (Column 3, Lines 7-17).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary (6,778,937) as in view of Peterson (US 2004/0183800 A1).

Regarding claims 2-5, 7, 11-14, 20 Cleary teaches the limitations as discussed above. However, Cleary does not teach a method wherein the graphical representation is a contour plot, which is updated periodically to provide a real-time representation to the display.

Peterson teaches a method wherein the graphical representation is a contour plot (Page 1, Paragraph 11), which is updated periodically to provide a real-time representation to the display (Page 2, Paragraph 22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a method wherein the graphical representation is a contour plot, which is updated periodically to provide a real-time representation to the display as taught by Peterson into Cleary for the purpose of simplifying data presentation (Peterson, Page 1, Paragraph 5).

Regarding claim 6, 15 Cleary teaches a method wherein the graphical representation is a contour plot which is updated periodically, and said method further comprises a calculation of an average sensor measurement (Column 10, Lines 10-26) that is displayed in conjunction with the graphical representation (Column 10, Lines 66-67, Column 11, Lines 1-16).

Regarding claim 8, 16 Cleary teaches a method wherein the data is transmitted through a network connection (Column 4, Lines 41-46).

Regarding claim 9, 17, 19 Cleary teaches a method wherein the combustor condition is selected from a group consisting of CO, O<sub>2</sub>, and temperature ("temperature", Column 11, Lines 35-46).

Regarding claims 10, 18, Cleary teaches a method of presenting a changing combustor condition comprising:

Sensing the combustor condition using a sensor array in a gas path of the combustor (Column 11, Lines 25-30);

Generating data from the sensor array representative of the combustor condition at a plurality of positions in the gas path (Column 7, Lines 16-25). However, Cleary does not teach a method wherein the graphical representation is a contour plot, which is updated periodically to provide a real-time representation to the display.

Peterson teaches a method wherein the graphical representation is a contour plot (Page 1, Paragraph 11), which is updated periodically to provide a real-time representation to the display (Page 2, Paragraph 22).

Art Unit: 2863

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a method wherein the graphical representation is a contour plot, which is updated periodically to provide a real-time representation to the display as taught by Peterson into Cleary for the purpose of simplifying data presentation (Peterson, Page 1, Paragraph 5).

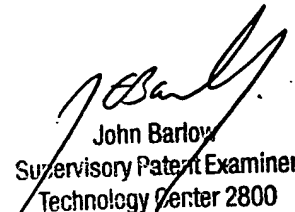
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujoy K. Kundu whose telephone number is 571-272-8586. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKK  
06/07/05

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800